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(54) Title: EXPANDABLE POLYSTYRENE COMPOSITION

(57) Abstract: The invention relates to an expandable polystyrene composition in the form of expandable beads, comprising by weight (1) 100 parts of a styrene polymer, (2) from 2.2 to less than 4.0 parts of at least one blowing agent, and (3) from 0.01 to 0.4 part of at least one plasticising. The composition is particularly useful for manufacturing medium density expanded moulded polystyrene objects, particularly with a density from 40 to 190 g/l. The invention also relates to a process for manufacturing such objects, employing an expandable polystyrene composition in the form of beads containing by weight (1) 100 parts of a styrene polymer, (2) from 2.2 to less than 4.0 parts of at least one blowing agent, and (3) from 0 to 0.4 part of at least one plasticising agent. The process comprises (i) a pre-expansion stage by heating the expandable beads so as to form pre-expanded beads with a bulk density of 40 to 190 g/l, (ii) a stabilisation stage by contacting the pre-expanded beads with a gaseous medium at 0 to 40°C, under an absolute pressure of 50 to 160 kPa, for a period of 6 to 48 hours, and (iii) a moulding stage by introducing and heating the beads thus stabilised into a mould. The invention also relates to pre-expanded beads with a bulk density of 40 to 190 g/l, containing by weight (a) 100 parts of a styrene polymer, (b) from 0.5 to less than 3.0 parts of at least one blowing agent, and (c) from 0 to 0.4 part of at least one plasticising agent.

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